

Short Communication

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Using Cultural Domain Analysis to Examine Andean Social Roles

Benjamin Blakely Brooks, PhD**Department of Anthropology, East Carolina University, Greenville, NC 27858, USA***INTRODUCTION**

To better understand the relationships between social stress and human physiology one must examine what components of a society are socially stressful. The research reported here is based on analysis of free list data collected as part of a larger project aimed at uncovering the elements of Andean culture and society that are socially stressful. The research was conducted using the methods of cultural domain analysis to gather information from Andean highland farmers about potential areas of social stress. To measure social stress one must understand the sociocultural areas where being incongruent with societal expectations can create a potentially stressful experience for an individual. Social stress was operationalized in Andean society based on Andean cultural notions of reciprocity and community participation. These areas were analyzed by eliciting informant responses with free listing tasks regarding the characteristics of a farmer, neighbor, and community member. Informants were asked what characteristics are commonly associated with a good farmer, a bad farmer, and what tools are used in farming. The data has been analyzed using the statistical software program of Anthropac that organizes and calculates the relationships between the characteristics listed by each informant. Characteristics that are listed by a large percentage of the sample suggest they have high importance in Andean cultural notions of social order. The lack of these items of importance in the lives of specific individuals often can be indicators of that person's incongruence with their society. Identifying the elements of the cultural models of social life, such as the characteristics associated with a good farmer, can help in the identification of the points in a society where social stresses can occur.

RESEARCH BACKGROUND

The research reported here is influenced by a cognitive anthropological understanding of culture that focuses on understanding the relationships between individual and group cultural notions of social life. Individuals are understood to learn and share cultural models of how any given social context is organized, understood, associated with meaning, and interpreted in relation to the individual and the group. The conflict between individual's behaviors and group cultural notions has been identified as having potential physiological impacts in the form of social stress, higher blood pressure, and increased mortality rates. Dressler¹ has found that difficulties experienced by individuals in trying to live in accordance with shared cultural models—or what he terms 'cultural consonance'—are associated with physical and mental health outcomes. Dressler's description of chronic social stress was preceded by a study by Rubel and his collaborators² that examined the consonance between local social norms and individuals' success in adhering to those norms. These researchers found that individuals who were less effective at enacting local norms were also more likely to report higher social stress levels. Cognitive anthropological understandings of culture can aid in the analysis and interpretation of elements of social stress within a society.

When studying the fright illness of *susto* and social stress in Mexico many themes were identified by O'Neil and Rubel³ that were associated with stress such as the adequacy of living arrangements, definitions of sex roles, ability to respond to role expectations within the family context, ability to respond to role expectations outside the family context, and ability to

function fully as an adult.³ In more recent social stress research in the Andes of Peru, Brooks⁴ found many of the same themes as what Rubel et al² found in Mexico to be potentially stressful. For example, in the study of the chronic head pain illness of *chucaque* and social stress Brooks⁴ found that for many farmers the ability to respond to role expectations outside the family context was particularly important, because Andean farmers rely on their neighbors for support when they need additional workers for planting or harvesting crops in their fields or when they have a bad harvest. Additionally, Brooks⁴ noted that to be successful farmer one needs access to all necessary farming tools and technology to effectively plant and harvest crops, including a team of bulls for plowing called the *yunta*, when one lacks these resources than it becomes a potential area of social stress. Assessing social stress in a society is difficult; therefore, researchers have to use increasingly complex methods to extract what components of society are stressful and why those elements may create stress in the life of one individual and no stress for others.

METHODS

The research was conducted in the Callejón de Huaylas Valley located in the Department of Ancash, at an altitude ranging from 10,000-15,000 ft. Within the valley seven of the hamlets were selected and each was comprised of highland farmers engaged in small-scale agriculture. The research was part of a larger study of Andean social roles and *susto* conducted during a 6-month period. Thirty informants were recruited in seven hamlets with the aide of key informants.

The research project consisted of a cultural domain analysis of various domains of social role expectations. Cultural domain analysis is a set of techniques for eliciting terms from informants for a specific domain. These techniques were used to explore the possible social roles of importance in the Callejón de Huaylas valley. The cultural domain analysis was supplemented with participant observation in the seven research hamlets in the valley to gain additional knowledge of possible social role expectations and potential social stressors experienced by highlanders. For the research data reported on here, informants

were asked to free list items for the specific domains of good farmer, bad farmer, and farm tools. Informants were asked “What is the difference between good farmers and bad farmers in the Callejón de Huaylas?” and “What supplies and tools do farmers use to plant and harvest in the Callejón de Huaylas?” The purpose of the free listing of terms is to elicit from the informant what comprises the structure of their cultural model of the domain.

RESULTS

The free list of farm tools by informants was imported into the Anthropac data analysis program and tested for informant agreement on the farm tools and the importance of each farm tool. The free list was generated in response to the following question “What supplies and tools do farmers use to plant and harvest their farms in the Callejón de Huaylas?” This generated a list of 53 terms. There were 18 terms used most commonly (by 20% of the sample). The most important farm tools (see table 1) were the *yunta* (team of bulls), the pickaxe, the shovel, and the potato. The *yunta* was the most frequently named farm tool by informants with 90% of informants naming the *yunta* as a necessary farm tool. The shovel or *lampa* was also commonly named by informants with 83% of informants mentioning the shovel as an important tool. The pickaxe or *pico* typically accompanied the shovel as the other necessary hand tool for Andean farmers and 80% of the sample of informants mentioned it as important when planting and harvesting. The potato or *papa* was the only seed mentioned in the most commonly named items with 80% of informants listing it as important to an Andean farmer. The potato’s average rank was 8.833 so it was less commonly ranked on average at the top of informant’s lists but in comparison to other items it remained highly important for Andean culture.

The free list in table 2 and 3 was generated in response to the following question: “What is the difference between good farmers and bad farmers in the Callejón de Huaylas?” This generated a list of 93 terms. There were 10 terms used most commonly (by 20% of the sample). It should be noted here that we collapsed a number of specific terms in order to generate

Farm Tool	Frequency	Respective Percentage (%)	Average Rank
<i>yunta</i>	27	90	4.593
shovel	25	83	4.520
pick axe	24	80	3.958
potato	24	80	8.833
plough	23	77	5.609
wheat	22	73	10.545
corn	21	70	9.619
crowbar	20	67	4.850

Table 1: Summary of free list of farm tools.

Farm Tool	Frequency	Respective Percentage (%)	Average Rank
not sharing with neighbors	11	37	2.364
fighting with neighbors	10	33	2.700
being drunk	8	27	2.750
envious of other neighbors	7	23	2.000
arguing with neighbors	5	17	3.000
robbing other neighbors	5	17	2.800

Table 2: Summary of free list of characteristics associated with bad farmers.

Farm Tool	Frequency	Respective Percentage (%)	Average Rank
sharing with neighbors	16	53	2.438
inviting neighbors to eat a meal	7	23	2.429
helps neighbors	6	20	3.000
plants crops	6	20	2.000
being a hardworker	5	17	2.400
giving gifts to neighbors	5	17	2.400
Being a community authority	5	17	3.600

Table 3: Summary of free list of characteristics associated with good farmers.

these categories (e.g. inviting neighbors to dinner and having a meal with neighbors were grouped under the same category of “invites neighbors to eat”). The free list was imported in Anthropac and 37% of informants mentioned not sharing with neighbors making it the most common characteristic of a bad farmer (see table 2). Fighting with neighbors was mentioned by 33% and being drunk was listed by 27% of informants as associated with a bad farmer. Envy is often feared in Andean society and 23% of informants described a bad farmer as envious. Arguing with neighbors and robbing other neighbors were mentioned by 17% of informants.

The free list data for characteristics associated with a good farmer was imported into Anthropac and the most commonly listed characteristic was sharing with neighbors mentioned by 53% of informants (see table 3). Inviting neighbors to eat a meal was listed by 23% and helping neighbors and planting crops were listed by 20% of informants. Being a hardworker, giving gifts to neighbors, and being a community authority were all listed by 17% of informants. The most commonly listed characteristics associated with bad and good farmers highlight the importance of neighbor relationships in Andean culture.

DISCUSSION

Andean farmers use many tools and seeds to grow a variety of crops in sometimes-marginal mountainous environments. The Andean terrain is steep, so a tractor cannot be used to plow the land instead highland farmers use the *yunta* a plowing team of two bulls joined together by a yoke and attached to a metal plough. The economic marginality of most Andean farmers who have little economic resources favor

the *yunta* as the only viable means to prepare the land. A male informant describes the importance of the *yunta*,

Primero se necesita tierra. Después se usan los toros, los arados y los yugos para preparar el terreno. First land is needed then bulls, ploughs, and yokes are needed to prepare land.

For farmers in the Callejón de Huaylas the *yunta* is a crucial component needed to prepare the land for planting. Informants in Pampamarca were observed planting potatoes using the *yunta*. First the *yunta* breaks the ground open by cutting long lines across the field then seed potatoes are placed in the freshly plowed areas. Lastly, the *yunta* cuts another line across the field beside the previous one covering the seed potatoes. These analyses are further supported by the sociocultural data gathered from informant focus groups and participant observation. When a farmer lacks access to a *yunta* than it is particularly difficult and stressful to plant or harvest crops.

The potato, shovel, and pickaxe are also regarded as highly important to Andean farmers. The potato was listed on most informant free lists indicating its importance as a food crop. However, the potato is more than food in the Andean cultural context it represents the essence of being Andean. A male informant described the importance of the potato,

La papa es parte de preparar el terreno. La papa es el basico. The potato is part of the preparing of the land. The potato is eaten everyday.

The potato is a staple food for Andeans and it also represents the Andean culture because it was first domesticated in this part of the world and all Andean farmers' plant potatoes. If a farmer cannot plant potatoes or does not own the shovel and pick axe needed for planting and harvesting crops than they will experience social stress.

The free list of characteristics of bad and good farmers highlights the importance of neighbor relationships (*los vecinos*) in the Andes. The characteristics of not sharing and envious of other neighbors were common on many informant negative free lists suggesting that many Andean highlanders believe that neighbors should share their harvests and not be envious of each other. The good farmer characteristics support the notion that neighbors are needed for successful farming since sharing with neighbors and helping neighbors with planting and harvesting were listed by many informants as behaviors displayed by a good farmer. An informant described the neighbor relationships in her community,

*La gente trabaja junta –
apoyándose, ayudándose.
The people work together—
supporting each other, helping each other.*

The highland culture necessitates cooperation between neighbors as a balancing mechanism, but sometimes these neighbor relationships can deteriorate leaving some highland farmers with little alternatives but to hire help or to seek other means of income away from the farm. When one is unable or unwilling to support their neighbor or they are envious of another farmers harvest than the individual is not adhering to Andean cultural expectations and will experience social stress.

Andean highlanders often inhabit marginal lands and are subjected to economic marginalization, which contributes to their reliance on the *yunta* to prepare land and to develop cultural social support networks, such as neighbor relationships. The first phase of cultural domain analysis reported here as free listing allows for informants to tell the researcher what is important in their society as opposed to the researcher making their own assumptions. The importance of the *yunta* for highland agriculturalists is a significant finding because it indicates that the *yunta* is necessary to successfully farm; however, it also suggests that if a farmer lacks access to a *yunta* they may feel social stress. The second finding emphasizing neighbor relationships within highland agriculture is useful in showing that the neighbor has a role in Andean society, and if the social cohesiveness of a community has eroded than those farmers who are not fulfilling the culturally prescribed role of a good neighbor may be under social stress. For an Andean highlander to be a good neighbor and a successful farmer they must adhere to the culturally agreed upon social role expectations of Andean society. These findings point to contexts where social stress may occur within Andean society and identify potential areas where it may become associated with illness and poor health outcomes.

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